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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/528,482	10/06/2005	Craig Lucas Goodfellow	04630/032001	8462

22511 7590 03/08/2006

OSHA LIANG L.L.P.  
1221 MCKINNEY STREET  
SUITE 2800  
HOUSTON, TX 77010

EXAMINER
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TRAN, BINH Q

ART UNIT	PAPER NUMBER
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3748

DATE MAILED: 03/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/528,482

Applicant(s)

GOODFELLOW, CRAIG LUCAS

Examiner

BINH Q. TRAN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                | Paper No(s)/Mail Date. ____.  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>03/2005</u> .   | 6) <input type="checkbox"/> Other: ____.                                    |

### DETAILED ACTION

Receipt and entry of Applicant's Preliminary Amendment dated January 23, 2004 is acknowledged.

#### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

*Claims 1-10 are rejected under 35 U.S.C. 102 (b) as being anticipated by Hoshi et al. (Hoshi) (Patent Number 6,122,910).*

Regarding claims 1, and 8-10, Hoshi discloses a emission reduction apparatus for an engine exhaust (e.g. 2, 3, 4, 5), the apparatus comprising first and second exhaust paths (e.g. 2, 3, 4, 5) and first and second regenerable emission reduction elements (e.g. 7, 8) in the respective

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paths in which the first emission reduction element (e.g. 7) has a greater emission reduction capacity than the second emission reduction element (e.g. 8) (e.g. See Figs. 1-16; col. 30-34, lines 1-67).

Regarding claim 2, Hoshi further discloses that the first and second emission reduction elements have at least one of a heat dependent regeneration regime and a heat dependent emission reduction regime (e.g. See Figs. 1-16; col. 30-34, lines 1-67).

Regarding claim 3, Hoshi further discloses that the emission reduction element comprises a NO<sub>x</sub> trap (e.g. See Figs. 1-16; col. 30-34, lines 1-67).

Regarding claim 4, Hoshi further discloses that the NO<sub>x</sub> trap includes a particulate filter (e.g. See Figs. 1-16; col. 30-34, lines 1-67).

Regarding claim 5, Hoshi further discloses that the second emission reduction element has a lower operative temperature formulation than the first emission reduction element (e.g. See Figs. 1-16; col. 30-34, lines 1-67).

Regarding claim 6, Hoshi further discloses a controller for controlling operation of the apparatus (e.g. See Figs. 1-16; col. 30-34, lines 1-67).

Regarding claim 7, Hoshi further discloses an exhaust path (e.g. See Figs. 1-16; col. 30-34, lines 1-67).

***Claims 1-10 are rejected under 35 U.S.C. 102 (e) as being anticipated by Yokoi et al. (Yokoi) (Patent Number 6,516,612).***

Regarding claims 1, and 8-10, Yokoi discloses a emission reduction apparatus for an engine exhaust (e.g. 38, 42, 138, 142), the apparatus comprising first and second exhaust paths (e.g. 38, 42, 138, 142) and first and second regenerable emission reduction elements (e.g. 40, 44,

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140, 144) in the respective paths in which the first emission reduction element (e.g. 44) has a greater emission reduction capacity than the second emission reduction element (e.g. 40) (e.g. See Figs. 1-9; col. 5, lines 7-42).

Regarding claim 2, Yokoi further discloses that the first and second emission reduction elements have at least one of a heat dependent regeneration regime and a heat dependent emission reduction regime (e.g. See Figs. 1-9; col. 5, lines 7-42).

Regarding claim 3, Yokoi further discloses that the emission reduction element comprises a NO<sub>x</sub> trap (e.g. See Figs. 1-9; col. 5, lines 7-67; col. 6, lines 1-64).

Regarding claim 4, Yokoi further discloses that the NO<sub>x</sub> trap includes a particulate filter (e.g. See Figs. 1-9; col. 5, lines 7-67; col. 6, lines 1-64).

Regarding claim 5, Yokoi further discloses that the second emission reduction element has a lower operative temperature formulation than the first emission reduction element (e.g. See Figs. 1-9; col. 5, lines 7-67; col. 6, lines 1-64).

Regarding claim 6, Yokoi further discloses a controller for controlling operation of the apparatus (e.g. See Figs. 1-9; col. 5, lines 7-67; col. 6, lines 1-64).

Regarding claim 7, Yokoi further discloses an exhaust path (e.g. See Figs. 1-9; col. 5, lines 7-67; col. 6, lines 1-64).

#### ***Prior Art***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and consists of four patents:

Ueda et al. (Pat. No. 6886329), Nishiyama et al. (Pat. No. 6647710), Watanabe et al. (Pat. No. 6253547), and Hitomi et al. (Pat. No. 5233831) all disclose an exhaust gas purification for use with an internal combustion engine.

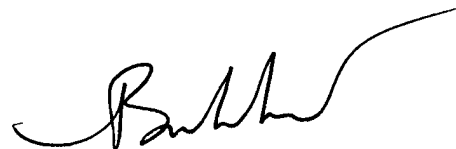
*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Binh Tran whose telephone number is (571) 272-4865. The examiner can normally be reached on Monday-Friday from 8:00 a.m. to 4:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion, can be reached on (571) 272-4859. The fax phone numbers for the organization where this application or proceeding is assigned are (571) 273-8300 for regular communications and for After Final communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BT  
February 28, 2006



Binh Q. Tran  
Patent Examiner  
Art Unit 3748